

Applicant : Neil H. Bander
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037P2RDV1B(RCE); CRF D-1912K

In the claims:

Please amend the claims as follows:

-- 68. (Currently Amended) A method of detecting normal, benign hyperplastic, or cancerous prostate cells or a portion thereof in a human subject, comprising:

providing an antibody or antigen binding portion thereof which binds to an epitope to an extracellular domain of prostate specific membrane antigen which is also recognized by a monoclonal antibody selected from the group consisting of an E99, a J415, a J533, and a J591 monoclonal antibody, wherein the antibody or antigen binding portion thereof is bound to a label effective to permit detection of normal, benign hyperplastic, or cancerous prostate cells or a portion thereof;

administering the antibody or antigen binding portion thereof to the human subject;

detecting the presence of the normal, benign hyperplastic, or cancerous prostate cells or a portion thereof by detecting the label.

69. (Reiterated) A method according to claim 68, wherein detecting the label provides an indication of where the prostate cells are localized within the body of the human subject.

70. (Reiterated) A method according to claim 69, wherein the label is detected using an imaging device.

71. (Reiterated) A method according to claim 68, wherein the administering is carried out parenterally.

72. (Reiterated) A method according to claim 71, wherein the administering is carried out intravenously.

73. (Reiterated) A method according to claim 68, wherein the administering is carried out by intracavitary instillation.

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74. (Reiterated) A method according to claim 68, wherein the administering is carried out rectally.

75. (Reiterated) A method according to claim 68, wherein the label is detected using a transrectal probe.

76. (Reiterated) A method according to claim 68, wherein the antibody or antigen binding portion thereof is administered following a prostatectomy.

77. (Reiterated) A method according to claim 68, wherein the antibody or antigen binding portion thereof is in a composition further comprising a pharmaceutically acceptable carrier, excipient, or stabilizer.

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78. (Cancel)

79. (Reiterated) A method according to claim 68, wherein the antibody is selected from the group consisting of a monoclonal antibody and a polyclonal antibody.

80. (Reiterated) A method according to claim 79, wherein the antibody is selected from the group consisting of an E99, a J415, a J533, and a J591 monoclonal antibody.

81. (Reiterated) A method according to claim 79, wherein the antibody is a monoclonal antibody produced by a hybridoma having an ATCC Accession Number selected from the group consisting of HB-12101, HB-12109, HB-12127, and HB-12126.

82. (Previously Canceled)

83. (Previously Canceled)

84. (Reiterated) A method according to claim 68, wherein the antibody or antigen

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binding portion thereof comprises an antigen binding portion of an amino acid sequence selected from the group consisting of SEQ ID NO:8 (variable heavy chain), SEQ ID NO:19 (variable light chain), an amino acid sequence of the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126, and an amino acid sequence of the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

? 85. (Reiterated) A method according to claim 84, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence of SEQ ID NO:8 (variable heavy chain) for an amino acid sequence of the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126 and an antigen binding portion of an amino acid sequence of SEQ ID NO:19 (variable light chain) for an amino acid sequence of the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

Σ 1
 86. (Reiterated) A method according to claim 84, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence selected from the group consisting of SEQ ID NO:8 (variable heavy chain) and SEQ ID NO:19 (variable light chain).

7 does not further limit 84
 Combinatorial
 87. (Reiterated) A method according to claim 84, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence from SEQ ID NO:8 (variable heavy chain) and an antigen binding portion of an amino acid sequence from SEQ ID NO:19 (variable light chain). } parts of ind.

88. (Reiterated) A method according to claim 84, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence selected from the group consisting of an amino acid sequence of the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126, and an amino acid sequence of the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

? does not
 89. (Reiterated) A method according to claim 84, wherein the antibody or antigen

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binding portion thereof comprises an antigen binding portion of an amino acid sequence of the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126 and an antigen binding portion of an amino acid sequence of the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126.

90. (Reiterated) A method according to claim 68, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence selected from the group consisting of SEQ ID NO:6 (variable heavy chain), SEQ ID NO:17 (variable light chain), a nucleic acid sequence which encodes the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126, and a nucleic acid sequence which encodes the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

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91. (Reiterated) A method according to claim 90, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion encoded by a nucleic acid sequence of SEQ ID NO:6 (variable heavy chain) or a nucleic acid sequence which encodes the variable heavy chain of the hybridoma having ATCC deposit no. HB-12126 and an antigen binding portion encoded by a nucleic acid sequence of SEQ ID NO:17 (variable light chain) or a nucleic acid sequence which encodes the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

92. (Previously Amended) A method according to claim 90, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence selected from the group consisting of SEQ ID NO:6 (variable heavy chain) and SEQ ID NO:17 (variable light chain).

93. (Previously Amended) A method according to claim 90, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence from SEQ ID NO:6 (variable heavy chain) and an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence from SEQ ID

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NO:17 (variable light chain).

94. (Previously Amended) A method according to claim 90, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence selected from the group consisting of a nucleic acid sequence which encodes the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126, and a nucleic acid sequence which encodes the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

95. (Previously Amended) A method according to claim 90, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence encoded by a nucleic acid which encodes the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126 and an antigen binding portion of an amino acid sequence encoded by a nucleic acid which encodes the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126.

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^
96. (Previously Canceled)

97. (Previously Canceled)

98. (Previously Canceled)

99. (Previously Canceled)

100. (Previously Canceled)

101. (Previously Canceled)

102. (Previously Canceled)

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103. (Previously Canceled)

104. (Previously Canceled)

105. (Previously Canceled)

106. (Previously Canceled)

107. (Reiterated) A method according to claim 68, wherein the prostate cells are prostate epithelial cells.

108. (Cancel)

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109. (Cancel)

110. (Cancel)

111. (Reiterated) A method according to claim 68, wherein the antibody or antigen binding portion thereof binds to live cells.

112. (Reiterated) A method according to claim 68, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence selected from the group consisting of an amino acid sequence of the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12109, and an amino acid sequence of the variable light chain produced by the hybridoma having ATCC deposit no. HB-12109.

113. (Reiterated) A method according to claim 68, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence of the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12109, and an amino acid sequence of the variable light chain produced by the hybridoma having ATCC

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deposit no. HB-12109.

114. (Reiterated) A method according to claim 68, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence selected from the group consisting of a nucleic acid sequence which encodes the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12109, and a nucleic acid sequence which encodes the variable light chain produced by the hybridoma having ATCC deposit no. HB-12109.

115. (Reiterated) A method according to claim 68, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence encoded by a nucleic acid which encodes the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12109 and an antigen binding portion of an amino acid sequence encoded by a nucleic acid which encodes the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12109.

51 ✓ 116. (Currently Amended) A method according to claim 68, ~~78~~, 84, 90, ~~108~~, or 111, wherein the antibody is a monoclonal antibody.

117. (Currently Amended) A method according to claim 68, ~~78~~, 84, 90, ~~108~~, or 111, wherein the antibody or antigen binding portion thereof is internalized with the prostate specific membrane antigen.

118. (Currently Amended) A method according to claim 68, ~~78~~, 84, 90, ~~108~~ or 111, wherein the antibody or antigen binding portion thereof is selected from the group consisting of a Fab fragment, a F(ab')₂ fragment, and a Fv fragment.

119. (Currently Amended) A method according to claim 68, ~~78~~, 84, 90, ~~108~~, or 111, wherein the label is selected from the group consisting of a fluorescent label, a biologically-active enzyme label, a radiolabel, a nuclear magnetic resonance active label, a luminescent label,

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and a chromophore label.

120. (Reiterated) A method according to claim 119, wherein the label is a radiolabel.

121. (Reiterated) A method according to claim 120, wherein the radiolabel is a short-range radiation emitter.

122. (Reiterated) A method according to claim 121, wherein the radiolabel is selected from the group consisting of ^{212}Bi , ^{213}Bi , and ^{211}At .

123. (Reiterated) A method according to claim 120, wherein the radiolabel is selected from the group consisting of ^{32}P , ^{125}I , ^3H , ^{14}C , and ^{188}Rh .

124. (Reiterated) A method according to claim 120, wherein the radiolabel is ^{131}I .

125. (Reiterated) A method according to claim 120, wherein the radiolabel is $^{99\text{m}}\text{Tc}$.

126. (Reiterated) A method according to claim 120, wherein the radiolabel is ^{111}In .

127. (Reiterated) The method according to claim 68, wherein the method is a method of detecting benign hyperplastic cells or a portion thereof in the subject.

128. (Reiterated) The method according to claim 68, wherein the method is a method of detecting cancerous prostate cells or a portion thereof in the subject.

129. (Cancel)

130. (Currently Amended) The method according to claim 120, wherein the radiolabel is an ~~β~~ -emitter α -emitter.

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131. (Currently Amended) The method according to claim 120, wherein the radiolabel is a ~~β~~-emitter β-emitter.

132. (Currently Amended) The method according to claim 120, wherein the radiolabel is a ~~β~~-emitter γ-emitter.

Please add the following new claims:

133. (New) A method of detecting benign hyperplastic cells or a portion thereof in a human subject, comprising:

providing an antibody or antigen binding portion thereof which binds to an epitope of prostate specific membrane antigen which is also recognized by a monoclonal antibody selected from the group consisting of an E99, a J415, a J533, and a J591 monoclonal antibody, wherein the antibody or antigen binding portion thereof is bound to a label effective to permit detection of normal, benign hyperplastic, or cancerous prostate cells or a portion thereof;

administering the antibody or antigen binding portion thereof to the human subject;

detecting the presence of the benign hyperplastic cells or a portion thereof by detecting the label.

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134. (New) A method according to claim 133, wherein detecting the label provides an indication of where the prostate cells are localized within the body of the human subject.

135. (New) A method according to claim 134, wherein the label is detected using an imaging device.

136. (New) A method according to claim 133, wherein the antibody is selected from the group consisting of an E99, a J415, a J533, and a J591 monoclonal antibody.

137. (New) A method according to claim 133, wherein the antibody or antigen binding portion thereof binds to live cells.

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138. (New) (New) A method according to claim 133, wherein the antibody is a monoclonal antibody.

139. (New) A method according to claim 133, wherein the antibody or antigen binding portion thereof is internalized with the prostate specific membrane antigen.

140. (New) A method according to claim 133, wherein the label is selected from the group consisting of a fluorescent label, a biologically-active enzyme label, a radiolabel, a nuclear magnetic resonance active label, a luminescent label, and a chromophore label.

141. (New) A method according to claim 140, wherein the label is a radiolabel.

142. (New) A method according to claim 141, wherein the radiolabel is a short-range radiation emitter.

143. (New) A method of detecting cancerous prostate cells or a portion thereof in a human subject, comprising:

providing an antibody or antigen binding portion thereof which binds to an epitope of prostate specific membrane antigen which is also recognized by a monoclonal antibody selected from the group consisting of an E99, a J415, a J533, and a J591 monoclonal antibody, wherein the antibody or antigen binding portion thereof is bound to a label effective to permit detection of normal, benign hyperplastic, or cancerous prostate cells or a portion thereof;
administering the antibody or antigen binding portion thereof to the human subject;
detecting the presence of the cancerous prostate cells or a portion thereof by detecting the label.

144. (New) A method according to claim 143, wherein detecting the label provides an indication of where the prostate cells are localized within the body of the human subject.

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145. (New) A method according to claim 144, wherein the label is detected using an imaging device.

146. (New) A method according to claim 143, wherein the antibody is selected from the group consisting of an E99, a J415, a J533, and a J591 monoclonal antibody.

147. (New) A method according to claim 143, wherein the antibody or antigen binding portion thereof binds to live cells.

148. (New) (New) A method according to claim 143, wherein the antibody is a monoclonal antibody.

149. (New) A method according to claim 143, wherein the antibody or antigen binding portion thereof is internalized with the prostate specific membrane antigen.

51 150. (New) A method according to claim 143, wherein the label is selected from the group consisting of a fluorescent label, a biologically-active enzyme label, a radiolabel, a nuclear magnetic resonance active label, a luminescent label, and a chromophore label.

151. (New) A method according to claim 150, wherein the label is a radiolabel.

152. (New) A method according to claim 151, wherein the radiolabel is a short-range radiation emitter.
